

response, the clean set is followed by a marked-up version indicating the changes made (see 37 CFR 1.121(c)(3)).

1. (TWICE AMENDED) An apparatus comprising:

an input section configured to generate a first control signal and a second control signal in response to an input signal and a select signal, wherein said input section comprises a first device and a second device each having a source and a drain configured to connect said input signal with said first control signal and said second control signal in response to said select signal; and

an output section configured to generate an output signal in response to said first and said second control signals, wherein said output signal is (i) related to said input signal when in a first mode and (ii) disabled when in a second mode, wherein one or more third devices each have a source and a drain configured to connect said first control signal and said second control signal when in said first mode.

2. The apparatus according to claim 1, wherein said apparatus comprises a push-pull multiplexer bit.

3. The apparatus according to claim 1, wherein an output load of said output signal is independent of an input load of said input signal.

4. The apparatus according to claim 3, wherein said output load is independent of said select signal.

5. The apparatus according to claim 1, wherein said first and second control signals are configured to eliminate output loading of said output signal from said input signal.

6. The apparatus according to claim 1, wherein coupling of non-selected inputs to said output signal is eliminated.

7. (AMENDED) The apparatus according to claim 1, wherein said output signal comprises a complement of said input signal when in said first mode.

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8. (AMENDED) The apparatus according to claim 1, further comprising two or more of each of said input section or said output section, configured as a multiplexer or a programmable interconnect matrix.

9. (AMENDED) The apparatus according to claim 1, wherein said input section is further configured in response to a complement of said select signal.

B3 10. (AMENDED) The apparatus according to claim 1, wherein said first and said second modes are controlled by said first and said second control signals.

B4 11. (TWICE AMENDED) The apparatus according to claim 1, wherein said input section further comprises:

one or more fourth devices coupled to said first and said second devices and configured to generate said first and said
5 second control signals.

12. (TWICE AMENDED) The apparatus according to claim 11, wherein:

said one or more fourth devices are coupled to (i) said select signal and (ii) a supply voltage or a ground voltage.

13. (TWICE AMENDED) The apparatus according to claim 12, wherein said output section comprises:

one or more fifth devices; and

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5 one or more sixth devices, wherein said fifth and said sixth devices are configured to present said output signal in response to said first and said second control signals.

14. The apparatus according to claim 11, wherein said first mode comprises an enabled mode and said second mode comprises a disabled mode.

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5 15. (TWICE AMENDED) An apparatus comprising:
means for generating a first control signal and a second control signal in response to an input signal and a select signal, wherein said input signal is connected to said first and said second control signals in response to a first state of said select signal; and

means for generating an output signal in response to said first and said second control signals, wherein said output signal is (i) related to said input signal when in a first mode and (ii) disabled when in a second mode, wherein one or more devices each have a source and a drain configured to connect said first control signal and said second control signal when in said first mode.

16. (TWICE AMENDED) A method for tri-stating an output of a bit, comprising the steps of:

(A) generating said output in response to a first control signal and a second control signal;

5 (B) connecting an input to said first and second control signals when in a first mode; and

10 (C) isolating said first and said second control signals from said input when in a second mode, wherein one or more first devices each have a source and a drain configured to connect said first control signal and said second control signal when in said first mode.

17. (TWICE AMENDED) The method according to claim 16, wherein said connecting step further comprises:

turning on one or more second devices; and

turning off one or more third devices.

18. (TWICE AMENDED) The method according to claim 17, wherein said isolating step further comprises:

turning on said one or more third devices; and

5 turning off said one or more first and said one or more second devices.

19. The method according to claim 16, wherein said first mode comprises an enabled mode and said second mode comprises a disabled mode.

20. The method according to claim 16, wherein said bit comprises a multiplexer bit.

B⁶ , 21. (AMENDED) The apparatus according to claim 1, wherein said output signal tracks said input signal and swings from rail to rail.
